

## **HONORS & AWARDS**

Guthman Research Chair, Kellogg Graduate School of Management, Northwestern University, Summer 1994.

Hoover National Fellowship, Hoover Institution, 1992 - 1993.

Faculty Research Fellow, National Bureau of Economic Research, 1987 - 1990.

Pepsico Research Chair, Northwestern University, 1990.

Kellogg Research Professorship, Northwestern University, 1989.

National Science Foundation Research Grant, 1987 - 1988.

Buchanan Chair, Kellogg Graduate School of Management, Northwestern University, 1987 - 1988.

IBM Chair, Kellogg Graduate School of Management, Northwestern University, 1986 - 1987.

## **RESEARCH INTERESTS**

*Industrial organization and business strategy, organization theory, theory of the firm, compensation and incentives, and the relationship between firm structure, human resources, management and incentives.*

## **TEACHING**

Courses taught: Intermediate Microeconomic Theory at the undergraduate level, Managerial Economics (microeconomic theory as applied to business strategy and decision making) at the M.B.A. level, The Economics of Information at the Ph.D. level.

New courses developed: Pricing Strategy; Managerial Economics for Manufacturing.

Also qualified to teach: graduate Microeconomic Theory; Industrial Organization and Labor Economics (all levels); the Economics of Personnel, Public Finance, Applied Game Theory (undergraduate or M.B.A levels).

## PUBLICATIONS AND WORKING PAPERS

"The Pricing of Customer Access in Telecommunications," with Steven S. Wildman, *Industrial and Corporate Change*, forthcoming.

"Bonus and Penalty Schemes as Equilibrium Incentive Devices, With Application to Manufacturing Systems," with Pau Olivella, *Journal of Law, Economics, and Organization*, 10, Spring 1994, pp. 1-34.

"Diversification as a Strategic Preemptive Weapon," *Journal of Economics and Management Strategy*, 2, Spring 1993, pp. 41-70.

"Using the Capital Market as a Monitor: Corporate Spin-offs in an Agency Framework," *RAND Journal of Economics*, 22, Winter 1991, pp. 505-518.

"Firm Organization and the Economic Approach to Personnel Management, *American Economic Review*, vol. 80, no. 2, May 1990, pp. 23-27.

"The Introduction of New Products," with Edward P. Lazear, *American Economic Review*, vol. 80, no. 2, May 1990, pp. 421-426.

"Ability, Moral Hazard, Firm Size, and Diversification," *RAND Journal of Economics*, 19, Spring 1988, pp. 72-87.

"Worker Reputation and Productivity Incentives," *Journal of Labor Economics*, vol. 5, no. 4, October 1987, part 2, pp. S87-S106.

"Imitation and Differentiation in New Product Markets," under second review at *RAND Journal of Economics*.

"Competition, Relativism, and Market Choice," with Edward P. Lazear, C.M.S.E.M.S. Working Paper No. 750, October 1987.

"An Empirical Analysis of Agency Theory and the Choice of Merger Partners," mimeo, Northwestern University, August 1987.

"The Role of Managerial Ability and Moral Hazard in the Determination of Firm Size, Growth and Diversification," Ph.D. Dissertation, University of Chicago, August 1985.

## RESEARCH IN PROGRESS

"An Empirical Analysis of Corporate Spin-offs in an Agency Framework," (with H. Adams).

"Information Release and Firm Structure."

"Firm Structure as an Informational Barrier to Entry."

"On the War of Attrition in Markets with Endogenous Cost of Capital."

"Incentives and Inconsistencies in Kahneman and Tversky's Prospect Theory," (with Pau Olivella).

## SELECTED TALKS

"The Pricing of Customer Access in Telecommunications," Conference on Public Policy and Corporate Strategy for the Information Economy, Evanston, Illinois, May 1996.

"Diversification as a Strategic Preemptive Weapon," University of Iowa, Iowa City, Iowa, February 1994.

"Diversification as a Strategic Preemptive Weapon," University of Buffalo, Buffalo, New York, February 1994.

"Diversification as a Strategic Preemptive Weapon," University of Southern California, Los Angeles, California, December 1993.

"Strategic Pricing" Winter Meetings of the Econometric Society, Discussant, Anaheim, California, December 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Michigan State University, Lansing, Michigan, November 1993.

"Diversification as a Strategic Preemptive Weapon," Rutgers University, New Brunswick, New Jersey, November 1993.

"Diversification as a Strategic Preemptive Weapon," University of California at Santa Cruz, Santa Cruz, California, November 1993.

"Diversification as a Strategic Preemptive Weapon," Graduate School of Business, Stanford University, Stanford, California, November 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Purdue University, West Lafayette, Indiana, September 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Summer Meetings of the Econometric Society, Boston University, Boston, Massachusetts, June 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," University of California, Department of Economics, Berkeley, California, May 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Stanford University, Graduate School of Business, Stanford, California, May 1993.

"Diversification as a Strategic Preemptive Weapon," Stanford University, Graduate School of Business, Stanford, California, April 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Hoover Institution, Stanford, California, April 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," University of California, Graduate School of Business, Berkeley, California, February 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Stanford University, Department of Economics, Stanford, California, February 1993.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," Hoover Institution, Stanford, California, January 1993.

"Pricing Strategies," Session Discussant, 1992 North American Winter Meeting of The Econometric Society, Anaheim, California, January 1992.

"Diversification as a Strategic Preemptive Weapon," University of Toronto, Toronto, Canada, November 1991.

"Diversification as a Strategic Preemptive Weapon," Queen's University, Kingston, Ontario, Canada, November 1991.

"Bonuses and Penalties as Equilibrium Incentive Devices, with Application to Manufacturing Systems," University of Chicago, Chicago, Illinois, June 1991.

"The Timing of Entry into New Markets," Summer Meetings of the Econometric Society, University of Pennsylvania, Philadelphia, Pennsylvania, June 1991.

"Innovation, Imitation, Productive Differentiation, and the Value of Information in New Markets," University of Chicago, Chicago, Illinois, April 1991.

"Bonuses and Penalties as Equilibrium Incentive Devices, with Application to Manufacturing Systems," Winter Meetings of the Econometric Society, Washington, D.C., December 1990.

"Corporate Spin-offs in an Agency Framework," University of Washington, Seattle, Washington, October 1990.

"The Timing of Entry Into New Markets," University of British Columbia, Vancouver, British Columbia, October 1990.

"Corporate Spin-offs in an Agency Framework," Texas A&M University, College Station, Texas, April 1990.

"Firm Organization and the Economic Approach to Personnel Management," Winter Meetings of the American Economic Association, New York, New York, Dec. 1989.

"Corporate Spin-offs in an Agency Framework," Western Finance Association Meetings, Seattle, Washington, June 1989.

"Corporate Spin-offs in an Agency Framework," University of Rochester, Rochester, New York, May 1989.

"Corporate Spin-offs in an Agency Framework," North American Summer Meetings of the Econometric Society, Minneapolis, Minnesota, June 1988.

"Competition, Relativism, and Market Choice," North American Summer Meetings of the Econometric Society, Berkeley, California, June 1987.

"Competition, Relativism, and Market Choice," University of Chicago, Chicago, Illinois, April 1987.

"Rate Reform and Competition in Electric Power," Discussant, Conference on Competitive Issues in Electric Power, Northwestern University, Evanston, Illinois, March 1987.

"Worker Reputation and Productivity Incentives," New Economics of Personnel Conference, Arizona State University, Tempe, Arizona, April 1986.

"Ability, Moral Hazard, and Firm Diversification," Yale University, New Haven, Connecticut, February 1985.

"Ability, Moral Hazard, and Firm Diversification," University of Rochester, Rochester, New York, February 1985.

"Ability, Moral Hazard, and Firm Diversification," Stanford University, Stanford, California, February 1985.

"Ability, Moral Hazard, and Firm Diversification," University of Minnesota, Minneapolis, Minnesota, January 1985.

"Ability, Moral Hazard, and Firm Diversification," California Institute of Technology, Pasadena, California, January 1985.

"Ability, Moral Hazard, and Firm Diversification," Duke University, Durham, North Carolina, January 1985.

"Ability, Moral Hazard, and Firm Diversification," Northwestern University, Evanston, Illinois, January 1985.

"Ability, Moral Hazard, and Firm Diversification," Brown University, Providence, Rhode Island, January 1985.

"Ability, Moral Hazard, and Firm Diversification," Harvard University, Cambridge, Massachusetts, January 1985.

"Ability, Moral Hazard, and Firm Diversification," University of California - Los Angeles, Los Angeles, California, January 1985.

"Ability, Moral Hazard, and Firm Diversification," University of Pennsylvania, Philadelphia, Pennsylvania, December 1994.

## REFEREEING

Dr. Aron has served as a referee for *The Rand Journal of Economics*, the *Journal of Political Economy*, the *Journal of Finance*, the *American Economic Review*, the *Quarterly Journal of Economics*, the *Journal of Industrial Economics*, the *Journal of Economics and Business*, the *Journal of Economic Theory*, the *Journal of Labor Economics*, the *Review of Industrial Organization*, the *European Economic Review*, the *Journal of Economics and Management Strategy*, the *International Review of Economics and Business*, the *Quarterly Review of Economics and Business*, *Management Science*, the *Journal of Public Economics*, the *Journal of Institutional and Theoretical Economics*, and the National Science Foundation.

## TESTIMONY

1997 Testimony on behalf of Ameritech in three states in proceedings before the state regulatory commissions to determine economic costs of providing unbundled network elements to competitors during the transition to competition pursuant to the Telecommunications Act of 1996.

1996 Testimony on behalf of Ameritech in five states regarding interconnection pricing and competitive issues in arbitration hearings pursuant to the Telecommunications Act of 1996.

1996 Testimony submitted to the Illinois Public Service Commission, on behalf of Ameritech, on the economic interpretation of the 1996 Telecom Act regarding interconnection pricing and costing.

July 1995, Testimony submitted to Michigan Public Service Commission, on behalf of Ameritech Michigan, on efficient pricing of local exchange services.

June 1995, Testimony submitted to Michigan Public Service Commission on "just and reasonable" price increases in local exchange services.

#### OTHER ENGAGEMENTS

The Appraiser's Coalition, et. al, v. Appraisal Institute, et. Al, Civil Action No. 93 C 913, U.S. District Court, Northern District of Illinois, Eastern Division *Analyzed issues of market power, market structure, market share, concentration, entry and exit, and antitrust injury.*

For the FTC, Revco's proposed acquisition of Rite-Aid. *Analyzed issues of market power, market structure, market share, concentration, entry and exit, and antitrust injury.*

For the Estate of Reginald F. Lewis in Carlton Investments v. TLC Beatrice International Holdings, Inc, Loida Nicolas Newis, as Executrix of the Estate of Reginald F. Lewis, et al. *Analyzed structure of executive compensation and firm and industry performance to determine whether compensation was in compliance with CEO's fiduciary duty.*

Support for Ameritech in defining its position in response to the FCC NPRM implementing the 1996 Telecommunications Act, May 1996,

For Telus of Canada, analyzed economic issues pertaining to access to cable television channel capacity, bottleneck facilities, competition, and cost, November 1996.

Reports of Debra J. Aron, "Pricing Strategy for Cellular Telephone Services," October 1994, November 1995. *Examined consumption patterns of cellular telephone services for demand elasticities and evidence of risk aversion, developed entirely new pricing strategies for cellular services in each of six major cellular telephone markets, and estimated the likely revenue effects of the strategy change for each market. Dr. Aron also developed and provided software to the client for estimating the revenue effects and the proposed pricing strategies.*

"An Analysis of the Marketability of a CPI Future" (with Edward P. Lazear), for the Chicago Mercantile Exchange, February 1985.

Report of Debra J. Aron, "Efficient Pricing of Telecommunications Equipment at the University of Chicago," for the University of Chicago, 1985.

As a Professor at Northwestern University, Dr. Aron has supervised numerous student consulting projects in which pricing strategies were analyzed for industries including health clubs, toys, paper products, food products, athletic shoes, and hardware.

**PERSONAL INFORMATION**

Born: March 15, 1957  
Los Angeles, CA

May 1997





Microsoft Excel - HM\_INTERFACE.XLS [Read-Only]  
HM Tools HM Inputs HM Help

# Hatfield Model v. 2.2, release 2

**GO!**

**State**

Michigan

**Status**

**Maximum Loop Fill Factors**

Note: Input values represent fill factor ceilings - effective fill factors will be lower

Density	Feeder	Distribution
<5	0.65	0.5
5-200	0.75	0.55
200-650	0.8	0.6
650-850	0.8	0.65
850-2550	0.8	0.7
2550+	0.8	0.75

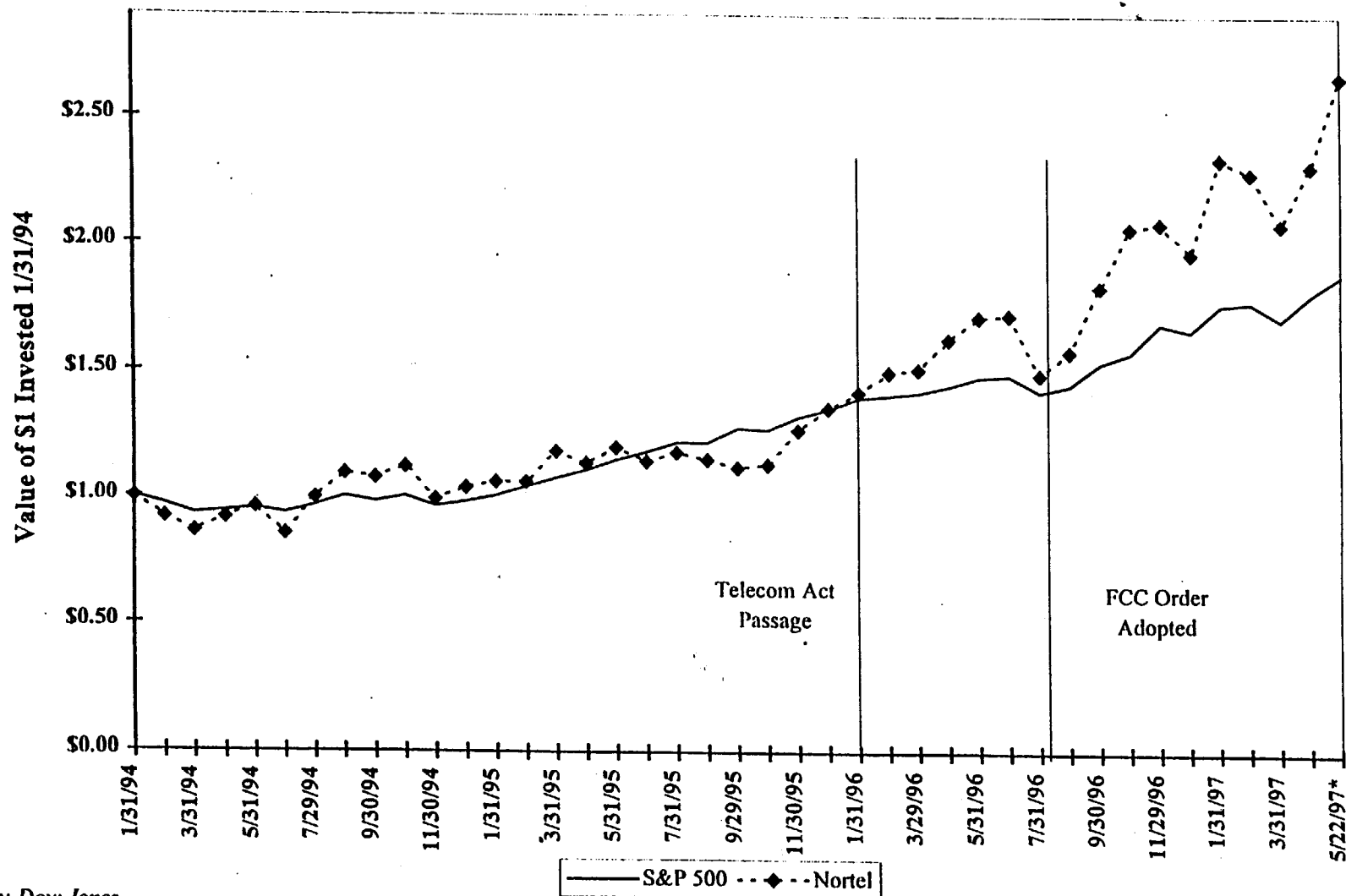
**OK**

**Reset Defaults** **Cancel**

Ready Calculate Sum=0



## Compound Annual Rate of Return for Nortel and S&P 500



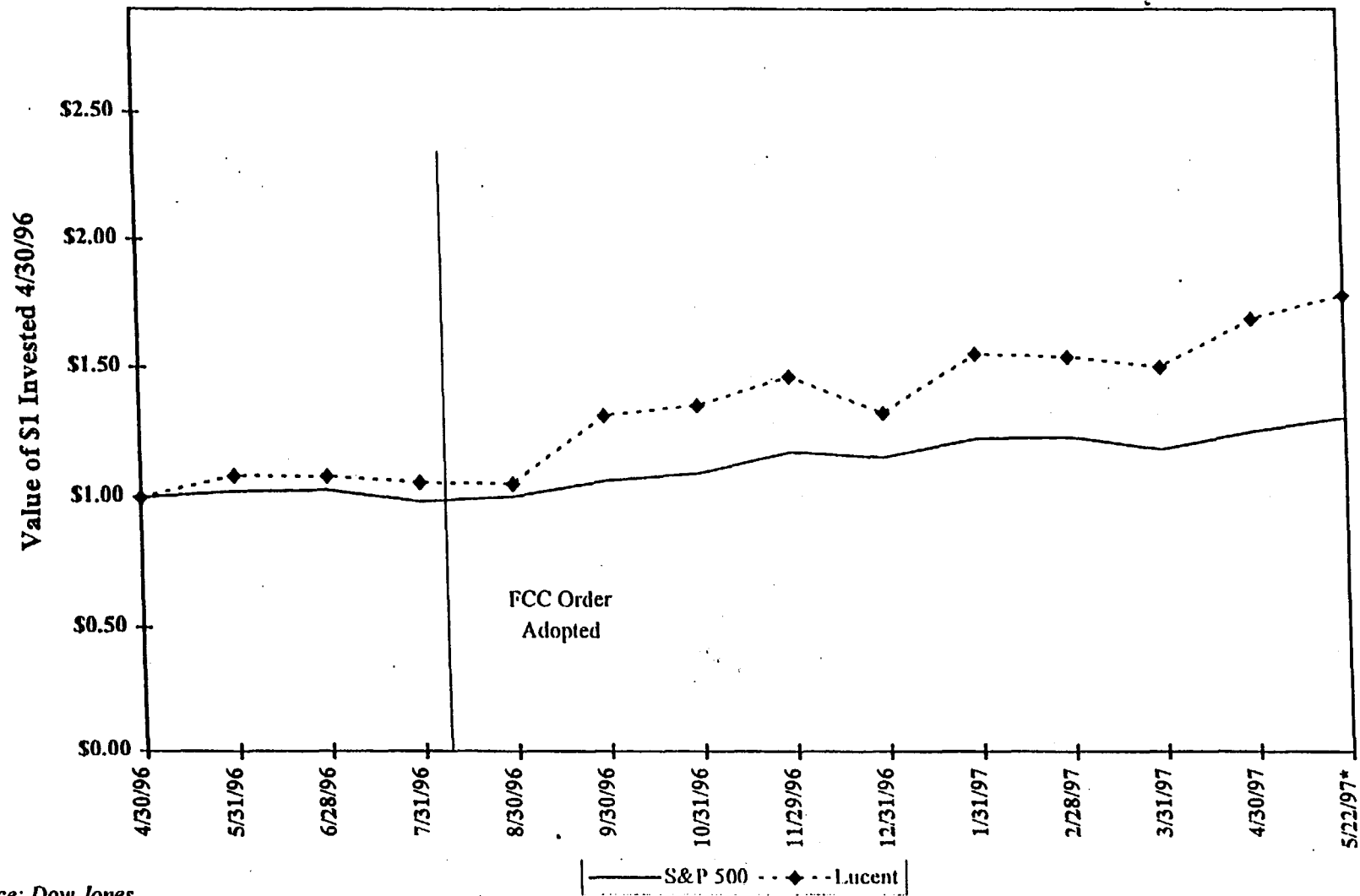
Source: Dow Jones

Note: Stock prices and index values are adjusted for cash, cash equivalent dividends, stock dividends, and stock splits.

\* Partial period data.



## Compound Annual Rate of Return for Lucent and S&P 500



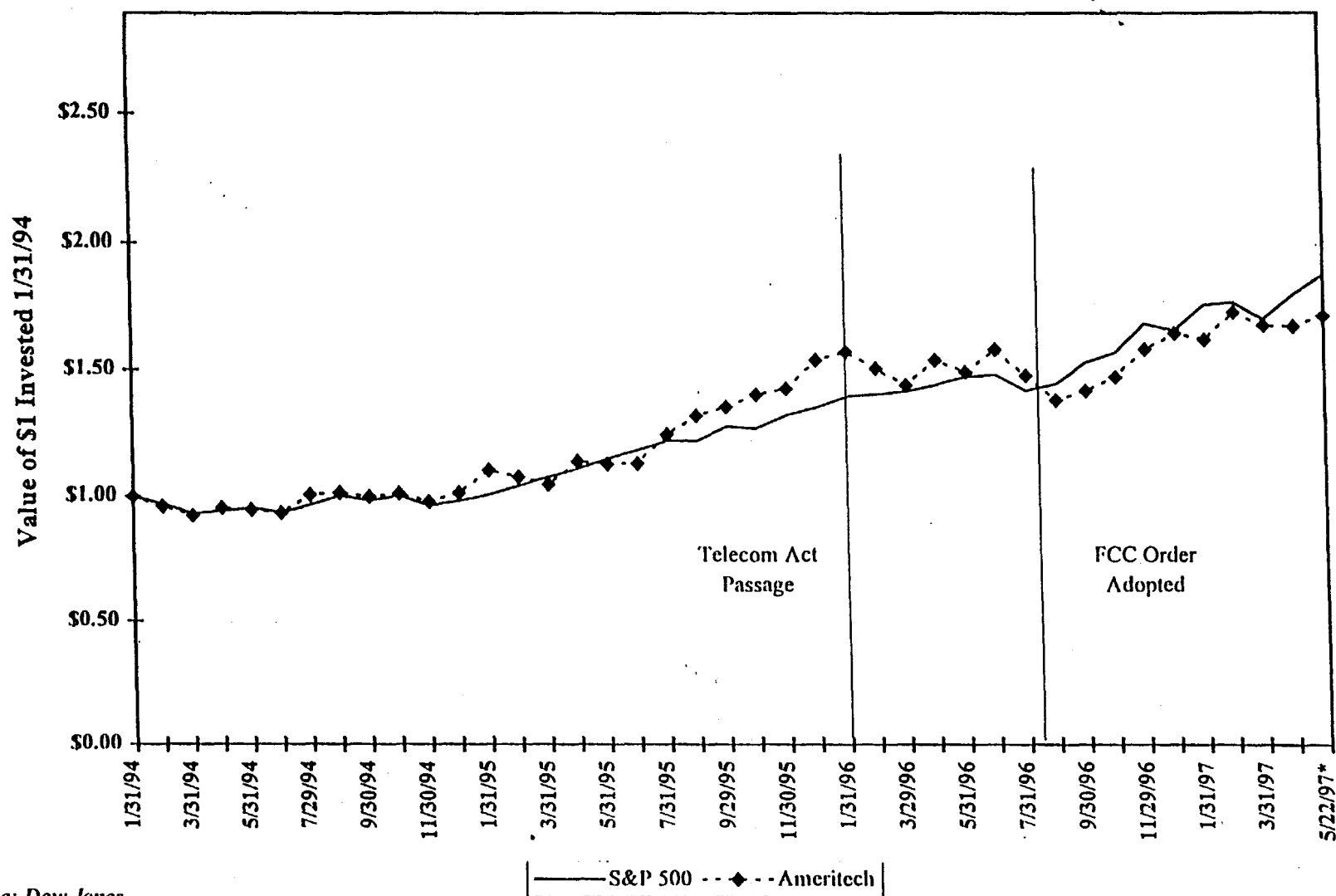
Source: Dow Jones

Note: Stock prices and index values are adjusted for cash, cash equivalent dividends, stock dividends, and stock splits.

\* Partial period data.



## Compound Annual Rate of Return for Ameritech and S&P 500



Source: Dow Jones

Note: Stock prices and index values are adjusted for cash, cash equivalent dividends, stock dividends, and stock splits.

\* Partial period data.



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**RECEIVED**

JUL - 7 1997

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of

Application of Ameritech  
Michigan Pursuant to Section  
271 of the Telecommunications  
Act of 1996 to Provide In-  
Region, InterLATA Services in  
Michigan

CC Docket No. 97-137

Reply Affidavit of Daniel P. Broadhurst  
on Behalf of Ameritech Michigan

**PUBLIC VERSION**

In the matter of )  
Application of Ameritech )  
Michigan Pursuant to Section )  
271 of the Telecommunications )  
Act of 1996 to Provide In-Region, ) CC Docket No. 97-137  
InterLATA Service, )  
in Michigan )  
)  
)

**STATE OF ILLINOIS            )**  
                                       **) SS.**  
**COUNTY OF COOK              )**

1. My name is Daniel P. Broadhurst. I am a partner of Arthur Andersen. My business address is 33 West Monroe Street, Chicago, Michigan 60603.
2. I previously submitted an affidavit on behalf of Ameritech Michigan on May 16, 1997 that described Arthur Andersen's analysis of shared (joint) and common costs and apportionment to unbundled network elements, physical and virtual collocation and transport and termination of local calls (collectively referred to as "UNEs") for purposes of network interconnection with competitive local exchange carriers ("CLECs").

3. This affidavit responds to the shared and common cost portion of Dr. August H. Ankum's affidavit dated June 5, 1997 filed on behalf of MCI Telecommunications Corporation.
4. Dr. Ankum suggests that Ameritech Michigan's combined 29.4% mark-up for shared and common costs to be applied to all Michigan UNEs, including loops, is at least 50 percent higher than is justifiable. In fact, based on his affidavits in connection with Case No. 11280 before the Michigan Public Service Commission ("MPSC"), Dr. Ankum proposes a reduction that is more in the range of 70% to Ameritech Michigan's combined 29.4% mark-up for shared and common costs after taking into account the adjustments he proposes to Ameritech's TELRIC studies.

Dr. Ankum arrives at his proposed mark-up by making certain adjustments to the shared and common cost pools identified in our study, all of which reduce the costs contained in those cost pools. Instead of developing his proposed mark-up by applying these adjusted cost pools to the adjusted TELRICs that Dr. Ankum advocates, however, Dr. Ankum first divides his adjusted shared and common cost pools by Ameritech's extended TELRIC amount to calculate his proposed percentage mark-up for Ameritech Michigan's shared and common costs. He then "double dips" by applying this new percentage mark-up to the lower, Ankum-adjusted TELRICs.

5. I do not agree with Dr. Ankum's proposed reduction to Ameritech Michigan's mark-up for shared and common costs or his assertions regarding Arthur Andersen's analyses. Among other things, Dr. Ankum's adjustments to Ameritech's shared and common cost pools do not reflect the ongoing nature of those costs. Further, Dr. Ankum's use of Ameritech's extended TELRIC amount to derive a mark-up percentage, despite the significant downward adjustments that he proposes to Ameritech Michigan's UNE TELRIC studies, is clearly arbitrary and result-oriented.

6. I have broken down this reply affidavit into the following areas:

- Contrary to Dr. Ankum's assertion, the shared and common costs attributed to Ameritech Michigan's UNEs represent reasonable ongoing forward-looking costs as defined by the Federal Communications Commission's (FCC) First Report and Order in CC Docket No. 96-98 to implement the local competition provisions of the Telecommunication Act of 1996 (the "FCC Order").
- Again contrary to Dr. Ankum's assertion, all retail-related expenses have been eliminated from the shared and common costs attributed to UNEs either explicitly through direct elimination of such costs or by virtue of the calculations used to derive the direct expense allocators.
- The shared and common costs attributed to UNEs reflect Ameritech's economies of scale, and do not include "start-up" costs as asserted by Dr. Ankum.
- The methodology used by Ameritech Michigan to allocate forward-looking shared and common costs to UNEs is based on accepted cost causation principles and represents a reasonable allocation methodology as defined by the FCC Order.
- The specific adjustments to Ameritech Michigan's shared and common costs proposed by Dr. Ankum are inappropriate.

I should also note that Dr. Ankum's assertions regarding Ameritech Michigan's shared and common costs are identical to the assertions he has made, and to which I have responded, in Ameritech's "TELRIC" cost proceedings before the MPSC and the state regulatory commissions of Ohio, Indiana and Illinois.

***THE SHARED AND COMMON COSTS ATTRIBUTED TO UNEs  
ARE REASONABLE FORWARD-LOOKING COSTS***

7. Dr. Ankum's assertion that the level of and the methodology used to allocate shared and common costs to Ameritech Michigan's UNEs is not in accordance with the FCC Order is wrong. The FCC Order does not specify the levels of shared and common costs attributable to UNEs. Furthermore, the allocation methodology used to attribute shared and common costs to Ameritech Michigan's UNEs is in accordance with paragraphs 694 and 696 of the FCC Order.
8. There are other factors that contradict Dr. Ankum's assertion that Ameritech Michigan's shared and common cost mark-up is inflated. In Wisconsin, the arbitration panels set permanent cost-based UNE rates, which were approved by the Public Service Commission of Wisconsin, in the MCI/Ameritech and the AT&T/Ameritech arbitrations and interconnection agreement approval proceedings under Section 252 of the Act. The shared and common cost percentage mark-up was set at approximately 29% in the MCI proceeding and 27% in the AT&T proceeding. Similarly, in connection with Section 252 arbitrations between Ameritech Illinois and AT&T, MCI and Sprint, the Staff of the Illinois Commerce Commission recommended, and the Illinois Commerce Commission subsequently adopted, a 35.83% mark-up for shared and common costs to be applied to Ameritech Illinois' UNEs on an interim basis. The Illinois Commerce Commission further found that the rates incorporating this mark-up complied with Sections 252(d)(1) and 252(d)(2) of the Act.
9. Moreover, in all five of its Section 252 state arbitration proceedings with Ameritech, MCI recommended use of the Hatfield Model --and the specific rates output by the Hatfield Model -- for setting prices for Ameritech's UNEs. Dr. Ankum testified in those arbitrations that the Hatfield Model includes a 10% mark-up for common costs alone. Ms. Terry L. Murray, an economist whom MCI presented as an expert witness in the Michigan and Wisconsin arbitrations, further testified that "[t]he total shared costs in the

Hatfield Model thus greatly exceed the shared costs that Ameritech has included in its cost studies.” Ameritech Wisconsin - MCI Arbitration Proceeding, Docket Nos. 6720-MA-104 and 3258-MA-104, Tr. at P. 233.

10. Dr. Ankum asserts on page 47 of his June 5, 1997 affidavit that “After expenses were identified for 1996, a projection was made for 1997 budgets”. On Page 48, he goes on to state that “Ameritech’s argument that the use of 1997 budget projections ensures that the costs are forward-looking is baseless. Ameritech’s 1997 budget projections ensures only that the costs will represent Ameritech’s historic, embedded costs.” Dr. Ankum’s assertions are incorrect; Arthur Andersen did not make a projection of Ameritech’s 1997 budget based on 1996 costs. At pages 5 and 6 of my May 16, 1997 affidavit, I clearly explain that we used Ameritech’s own budgets for calendar year 1997 for purposes of our analysis. I also explain why such a period is entirely consistent with the FCC’s requirement to develop a reasonable method for determining forward-looking joint (shared) and common costs. The shared and common costs identified in our study are not associated with the embedded network. At page 5 of my May 16, 1997 affidavit, I explained that we used Ameritech’s budgets for calendar year 1997 precisely to ensure that our analysis was forward-looking.
11. Dr. Ankum asserts, on page 48 of his June 5, 1997 affidavit, that I never examined Ameritech’s 1997 budgets to see if they represent efficiently incurred costs. While I did not perform an independent “efficiency examination”, I do have reason to believe that the shared and common costs identified in my study do represent an efficient level of costs. I stated on pages 7 and 8 of my May 16, 1997 affidavit only that Arthur Andersen did not perform an independent evaluation of the efficiency of Ameritech’s operations, nor did I believe that such an evaluation was expected by the FCC based on my reading of the FCC Order. However, I go on to state that I believe Ameritech incurs costs efficiently based on a number of factors:
  - The company has been subject to price cap or incentive regulation to varying degrees throughout its region in both the Federal and state

jurisdictions. This type of regulation emphasizes price control and to the extent costs can be incurred more efficiently, Ameritech benefits by realizing greater earnings.

- The budgeting process itself serves as a primary control to ensure that costs are efficiently incurred. The budget includes productivity cost reductions for the upcoming year which are closely monitored by management of Ameritech and are a key determinant of individual performance measurement.
- Ameritech has faced competition since its creation in 1984, although not uniformly across all of its products and services. Independent payphone services, competitive access providers and intralata toll providers are competing directly with Ameritech. This competition has naturally driven Ameritech to become more efficient.

12. Dr. Ankum does not suggest an alternative approach for determining shared and common costs of a forward-looking efficient wholesale local exchange operation. Instead, Dr. Ankum advocates inappropriate adjustments to our study of shared and common costs. I discuss the inappropriateness of these adjustments in more detail below.
13. As I noted above, in all of MCI's arbitration proceedings with Ameritech that occurred between September and December of 1996, Dr. Ankum advocated the use of the Hatfield Model to calculate the forward-looking economic costs, including shared and common costs, of an efficient wholesale local exchange operation in the business of providing UNEs and interconnection.
14. Dr. Ankum and other MCI expert witnesses testified that the Hatfield Model provides a 10% mark-up for common costs alone. Ms. Murray, who MCI presented as an expert on the Hatfield Model, testified that the shared costs in the Model "greatly exceed" those included by Ameritech in its cost studies. Dr. Debra Aron specifically discusses the

shared and common costs produced by the Hatfield Model in her reply affidavit in this proceeding.

15. Dr. Ankum asserts on page 51 of his June 5, 1997 affidavit, "Again, given that shared and common costs stand in relationship to network investments and expenses, it logically follows that if the TELRIC costs of a forward-looking, least cost network are roughly 30% below the embedded costs of the actual network, then the shared and common costs associated with the forward-looking, least cost network are most likely also 30% below the actual shared and common costs." Dr. Ankum apparently does not understand the relationship of common and shared costs to volume sensitive costs (e.g., those costs included in TELRIC). Common costs are costs that do not vary with the level of output or, in other words, with the level of volume sensitive costs included in TELRIC. The shared costs that we have identified do not vary proportionally with the level of volume sensitive costs. Shared costs will only increase or decrease, to a limited extent, with changes in demand for the products that share these costs. These definitions are consistent with paragraph 676 in the FCC Order. The nature of shared and common costs is at odds with Dr. Ankum's suggestion that the level of shared and common costs will vary proportionally with the level of volume sensitive costs included in TELRIC.
16. On pages 49 through 51 of his June 5, 1997 affidavit, Dr. Ankum talks extensively about NYNEX's carrying charge factors ("CCF") related to maintenance in the context of shared and common costs. Maintenance expense is a component of TELRIC. The shared and common costs we have identified do not include any direct or first level supervision maintenance costs.
17. Dr. Ankum is wrong in his assertion that NYNEX's least cost fiber network will result in less maintenance, therefore less shared and common costs will be required. Again, shared and common costs do not vary proportionally with changes in volume sensitive costs.



18. In the proceeding referred to by Dr. Ankum on pages 49 through 51 of his June 5, 1997 affidavit, NYNEX applies a 33% joint and common cost mark-up to unbundled links. On page 78 of its August 23, 1996 initial post-hearing brief (Cases 95-C-0657, 94-C-0095, 91-C-1174), NYNEX states "The Company's Cost Study showed that the incremental cost of an unbundled link is \$14.20. To that figure, it is necessary to add \$4.68 of common costs, including the joint costs of structures". This equates to a 33% mark-up on NYNEX's incremental cost of an unbundled link.

***RETAIL COSTS ARE NOT INCLUDED IN THE  
SHARED AND COMMON COSTS ATTRIBUTED TO UNEs***

19. On page 60 of his June 5, 1997 affidavit, Dr. Ankum asserts that "An examination of the workpapers of Arthur Andersen filed in MPSC Case No. 11280 reveal numerous instances in which costs are categorized as shared and common costs to be recovered from unbundled network elements that are, in fact, retail related." Dr. Ankum is incorrect; retail costs are not included in the shared and common costs attributed to UNEs. The methodology we utilized to generate the general allocation factors used to allocate the common costs identified in the Network, Corporate and, to some extent, the AOCs/State Administrative (Centralized Services) organizations to Ameritech Information Industry Services (AIIS), Ameritech's wholesale products and services organization, excludes all of the retail costs associated with the Ameritech business units involved in providing local exchange service to retail customers. As explained at page 4 of my May 16, 1997 affidavit, the Network and the Centralized Services organizations provide the underlying telephone network used to provide both retail and wholesale services as well as the related administrative support functions to the Ameritech business units involved in the provision of local exchange service defined as "Core-Telephone" or "Core-Tel" by Ameritech. The Corporate organization provides support services to all of Ameritech's businesses, both those involved in Core-Tel activities and those involved in other lines of business.